

UNITING IN DISCOVERY

2022 ANNUAL REPORT

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ABOUT THE BURROUGHS WELLCOME FUND



MORE THAN 60 YEARS OF INVESTING IN SCIENTISTS AND BIOMEDICAL SCIENCE

Founded in 1955, the Burroughs Wellcome Fund is an independent private foundation dedicated to advancing the biomedical sciences by supporting research and other scientific and educational activities.

Within this broad mission, BWF seeks to accomplish two primary goals—to help scientists early in their careers develop as independent investigators, and to advance fields in the biomedical sciences that are undervalued or in need of particular encouragement.

BWF's primary approach is to target individual researchers at degree-granting institutions in the United States and Canada, providing financial support through our competitive, peer-reviewed award programs. In complement to our support of academic research, we also make grants to nonprofit organizations whose missions improve the overall environment for scientific activities and careers. Above all, BWF establishes relationships and invests in the person. We prioritize the researcher's individual development—designing awards that enhance opportunities for training, collaboration, and idea-sharing. We then facilitate networks, gatherings, and conversations to further provide awardees with a diverse community of expertise, mentorship, and inspiration.

BWF believes that a diverse scientific workforce is essential to the process and advancement of research innovation, academic discovery, and public service.

Our investment in the person ensures that each award has life beyond any single grant—that creative, original, and unique solutions to biomedical problems will continue to rise throughout an investigator's career—and in turn, confer good health and strength for all humankind.

2022 HIGHLIGHTS

MARCH 24, 2022

Andi Webb (CAST) learns effective ways to combat climate change and help protect the pristine land and water of Antarctica.





APRIL 1, 2022

Leah Carper of Guilford County Schools is North Carolina's 2022 Burroughs Wellcome Fund Teacher of the Year.

APRIL 6, 2022

Reviewing Next Gen Pregnancy Initiative grant applications at the Burroughs Wellcome Fund.





APRIL 8, 2022

Álvaro Laiz and the ancestors that inhabit us - The University Museum of Navarra



2022 HIGHLIGHTS





MAY 12, 2022 Meet the winners of the SMT Center's North Carolina International Science Challange



MAY 12, 2022

The Burroughs Wellcome Fund Regional Teachers of the Year stopped by for a visit. (Photo by Alfred Mays)



MAY 12, 2022 Dr. Shirley Malcolm, director of the Sea Change Initiative at AAAS, presents at the Fund.



APRIL 21, 2022 BWF presented Dr. Dudley Flood with a plaque in recognition of the establishment of the Dudley Flood Center.

Rolly Simpson

Senior Program Officer Rolly Simpson retired in early 2022 after nearly 30 years of service to the foundation. As a program officer, Rolly managed the Career Awards for Medical Scientists program, the Physician-Scientist Institutional Award program, and the reproductive science programs.



MAY 18, 2022 Congratulations to Rolly Simpson on his retirement from the Fund.



MAY 31, 2022

Lou Muglia spoke with Rockefeller Foundation President Rajiv Shah about the role of data in philanthropy, the importance of partnerships, and the foundation's work on health and the environment.



JUNE 8, 2022

The SMT Center's Science Challenge finalists attend the National Geographic Explorers Summit in Washington D.C.

JULY 21, 2022

CAST recipient Beverly Owens takes BWF to the top of Machu Picchu as part of the Global Learning Fellowship.



Lisa Rhoades

Lisa Rhoades retired from her position as senior program associate at the North Carolina Science, Mathematics, and Technology Education Center, a nonprofit created by BWF in 2002. Lisa started work at the SMT Center in March 2003.





JULY 18, 2022

Alena Analeigh Wicker Becomes Youngest Black Person to Ever be Accepted Into Medical School through the Burroughs Wellcome Scholars Early Assurance Program at the University of Alabama at Birmingham's Heersink School of Medicine.



Past and current BWF awardees gather at the Streptococcal Biology Gordon Research Conference.



AUGUST 31, 2022

What does it mean to be a scientist & explorer? The activity featured BWF PDEP awardees (Dr. AJ Hinton pictured here) & National Geographic Society explorers.

Science has a place in everyone's lives, whether a scientist or not, and everyone should have the opportunity to envision themselves being a scientist.

PRESIDENT'S MESSAGE



Dear Friends,

Together with our Board of Directors, I am pleased to share with you the annual report of the Burroughs Wellcome Fund for the fiscal year 2022 We continue to operate in unprecedented times, and despite the challenges, the foundation was able to continue to make great strides towards our mission "to serve and strengthen society by nurturing a diverse group of leaders in biomedical sciences to improve human health through education and powering discovery in frontiers of greatest need".

Throughout the year we achieved many successes and milestones, such as an increased focus on funding strategies in climate change and human health, diversity in science, and science-arts partnerships seeking to enhance and inspire science communication. We are confident that the additional funding will continue to advance our mission in these critical areas. The foundation continues to provide vital assistance to the research enterprise, and we are committed to ensuring that all of our programs are effective and efficient in supporting our community. We are also dedicated to building relationships with our partners and stakeholders to expand scientific reach and impact.

We recognize the importance of understanding the effects of climate change on the environment, human health and society. Climate change has already impacted the planet and has the potential to cause further widespread destruction if left unchecked, and research is key to developing strategies to mitigate its effects. Foundations often provide funding for research into climate change, as well as its effects on various industries, ecosystems, and communities. This research can be used to inform policy decisions, develop new technologies, and mitigate the risks associated with climate change. By investing in climate change research, foundations are helping to ensure that our planet is better prepared to face the uncertain future of a rapidly changing environment. One area we feel especially important is to inspire the next generation of scientists and educators to make the area of climate change their priority.

BWF's recognizes that climate change has had a severe impact on human health over time and will continue to impact without mitigation strategies. Rising temperatures, extreme weather events, and air pollution are just a few of the impacts that are undermining health and well-being. Heatwaves, floods, and droughts have increased in frequency and intensity, leading to an increase in illnesses such as heat-related illnesses, respiratory problems, and water-borne diseases. Changes in climate can also lead to an increase in insect-borne diseases such as malaria, dengue, and Lyme disease by changing vector-pathogen geography. Moreover, air pollution from burning fossil fuels has been linked to a range of health issues, from asthma to heart disease. As the climate continues to change, the impacts on human health are likely to become even more severe.

We have made great strides in promoting and creating effective strategies around our Diversity in Science initiatives. This has provided opportunities to bring together a range of perspectives and experiences that can help us to better understand and solve complex problems. Diversity of thought and experience can help us to identify and address potential biases that can have a negative impact on the scientific process. Additionally, by promoting diversity and inclusion in science, we can work to ensure that everyone can contribute to research and innovation, and to benefit from the outcomes of those

BWF AWARDED MORE THAN \$41 MILLION IN GRANTS DURING FISCAL YEAR 2022



efforts. Science has a place in everyone's lives, whether a scientist or not, and everyone should have the opportunity to envision themselves being a scientist. In short, diversity is essential for enabling us to make the most of our collective potential and to move science forward.

We have continued to build upon our investments in the Science Communication program area. This is important as it helps bridge the gap between scientific discovery and the general public. Through science communication, scientists can explain their findings to the public in an understandable and accessible manner. This communication can lead to an increased understanding of science and its implications, as well as increased public engagement with the scientific process. Additionally, science communication can help researchers gain support for their work and inspire others, which can lead to even more research and discovery.

The connection between art and science is an important one. Art and science involve creativity, problem solving and critical thinking. Many of the same skills used in scientific experiments and discoveries can be used in creating art. For example, artists often use knowledge of color theory to create interesting and vibrant pieces and use mathematical equations to create detailed and precise drawings. Additionally, scientific advances have made art more accessible and diverse. New technologies for printing, sculpting, and digital art have allowed for new types of art to be created and shared. The connection between art and science is a strong one and we hope to continue to foster this connection through continued funding mechanisms.

Thank you for your support of the foundation. We look forward to working together in 2023 to achieve our goals and to grow our impact in the scientific community.

Sincerely,

Louis J. Muglia, MD, PhD President and CEO Burroughs Wellcome Fund

AWARD PROGRAMS

CAREER AWARDS ATTHE SCIENTIFIC INTERFACE

> CAREER AWARDS FOR MEDICAL-SCIENTISTS

CLIMATE CHANGE

INVESTIGATORS IN THE PATHOGENESIS OF INFECTIOUS DISEASE

INNOVATION

GRADUATE DIVERSITY ENRICHMENT PROGRAM

CAREER GUIDANCE

FOR TRAINEES

10 BURROUGHS WELLCOME FUND

AD HOC GRANTS

Ad hoc grants refer to funding opportunities that are provided on a one-time basis for specific projects or purposes. These grants are typically not part of a longterm funding plan, and they are not renewable unless explicitly stated otherwise.

These grants may be awarded for a variety of reasons, including emergency situations, unexpected opportunities, or projects that fall outside of the Fund's regular funding priorities. Despite these challenges, ad hoc grants can be an important source of support for organizations and individuals seeking funding for specific projects or purposes. By providing a flexible and responsive funding option, ad hoc grants can help to promote innovation, creativity, and problem-solving in various fields.

For more information on the Fund's Ad Hoc grant process, please contact program staff directly.



POSTDOCTORALDIVERSITY ENRICHMENTPROGRAM





CAREER AWARDS AT THE SCIENTIFIC INTERFACE

A diverse workforce leading to innovation and discovery in science underlies one of BWF's core beliefs. The Career Awards at the Scientific Interface (CASI) program supports the researcher with a diverse training background: it is a career development award for an individual who has completed a PhD in physical, mathematical or computational science or engineering and has transitioned to the biological sciences for their postdoctoral work. Proposals must be interdisciplinary and make use of non-biological approaches to investigating biological problems

CASI awards \$500,000 over 5 years to support the last years of postdoctoral training and the first three years of faculty service. Candidates must hold a PhD in one of the following fields: mathematics, physics, chemistry, computer science, statistics or engineering. Exceptions for candidates with PhD degrees in biology, biochemistry or other biological sciences will be made if the applicant can demonstrate significant accomplishment in a nonbiological field. Candidates must be citizens, permanent or temporary residents of the U.S. or Canada at a nonprofit, degree-granting institution in the U.S. or Canada.

Technological advances continue to create countless research opportunities at the interface between physics/ engineering and biology. Examples of proposals include, but are not limited to, computer simulation or mathematical modeling of physiological processes or biological behavior, development of imaging, screening or diagnostic tools, application of nanotechnology in treatment of disease. Proposals of particular interest include deep or machine learning applications of artificial intelligence as well as those that study the impact of climate change on human health. Applications from women, underrepresented minorities, underrepresented geographical regions, persons with disabilities, and persons from disadvantaged backgrounds are strongly encouraged.

2022 AWARDEES

William Allen, PhD

Harvard University Reverse-Engineering Brain Aging and Rejuvenation

Sima Asadi, PhD Massachusetts Institute of Technology

Pathogen-Laden Respiratory Droplet Formation via Mucosalivary Fluid Fragmentation

Diego Calderon, PhD

University of Washington Application of multiplex reporter assays towards understanding trans-acting gene regulation

Gregory Handy, PhD University of Chicago

Developing theoretical neuroscience frameworks to include plasticity from diverse brain cell types

Freeman Lan, PhD University of Wisconsin-Madison

Understanding complex microbial systems using ultrahigh-throughput experimentation, computational modelling, and machine-learning

Maijia Liao, PhD Yale University School of Medicine Biophysics and Molecular determinants of morphological scaling laws in developing dendrites

Leenoy Meshulam, PhD University of Washington

Bridging scales: from microscopic neural circuitry to macroscopic function

Samantha Petti, PhD Harvard University

Uncovering remote evolutionary links with next-generation homology search

Boyang Qin, PhD Princeton University

Tracing gene expression of single cells across lineages during bacterial biofilm formation and dispersal

Liat Shenhav, PhD Rockefeller University

Early prediction of pregnancy disorders using the vasculature of the eye

Andrew Yang, PhD

University of California-San Francisco Molecular tools to decipher communication across the blood-brain barrier

ADVISORY COMMITTEE

Anne Churchland, PhD (Co-Chair) University of California-Los Angeles

Todd Coleman, PhD Stanford University

Loren Frank, PhD University of California-San Francisco Daniel Hammer, PhD University of Pennsylvania

Christina Leslie, PhD Memorial Sloan Kettering Cancer Center

Melissa Lambeth Kemp, PhD Georgia Institute of Technology Emory University Alison Marsden, PhD Stanford University

Stephanie Palmer, DPhil The University of Chicago

Liam Paninski, PhD Columbia University

Matthew Redinbo, Ph.D. (Co-chair) University of North Carolina-Chapel Hill Lulu Qian, PhD California Institute of Technology

Shyni Varghese, PhD Duke University

Jesse Zalatan, PhD University of Washington

CAREER AWARDS FOR MEDICAL SCIENTISTS

The Career Awards for Medical Scientists (CAMS) is a program for the physician scientist (MD, DO, DVM, DDS) to aid in the transition from postdoctoral trainee or fellow to early independent faculty. BWF believes that the combination of clinical and academic training of a physician-scientist provides an important perspective for the advancement of biomedical research. This program's objective is to grow the number of physician scientists who commit to a career in research.

CAMS provides \$700,000 over five years for this career development award. Up to 10 awards are available. Candidates must be citizens, permanent or temporary residents of the U.S. or Canada at a degree-granting institution. They may hold a junior faculty appointment but must not be more than 13 years past their clinical doctorate degree. Award recipients must be committed to a full-time

career in research and are required to devote at least 75% of their time to research-related activities.

Proposals must be in the areas of basic science, translational science or biomedical science. Proposals in health services research or involving large-scale clinical trials are not eligible. BWF encourages applications in artificial intelligence and machine learning. Two awards will be given out to investigators whose research lies at the interface between psychiatry and neuroscience.

BWF strongly encourages submissions from women and underrepresented minorities (Blacks or African Americans, Hispanics or Latinos, Native Americans, or Native Hawaiians) as well as from those in underrepresented geographic regions (central, mountain and southern states).

2022 AWARDEES

Alice Cheng, MD, PhD

Stanford University Engineering a synthetic microbial community for research and treatment of Nonalcoholic steatohepatitis

Theodore Drivas, MD, PhD University of Pennsylvania

Discovering molecular and genetic mechanisms of ciliary signaling in common disease

William Freed-Pastor, MD, PhD Harvard Medical School

Overcoming T cell exclusion to augment immunotherapy in pancreatic cancer

Alexander Gitlin, MD, PhD Stanford University

Insights from complex immune disorders: how an apoptotic caspase unleashes inflammation

Gil Hoftman, MD, PhD University of California-Los Angeles Imaging transcriptomics across

developmental stages of early psychotic illness

William Hwang, MD, PhD Harvard Medical School

Identifying key regulators of the neuronal-like malignant phenotype and tumor-nerve crosstalk in pancreatic cancer

Maya Kotas, MD, PhD University of California-San Francisco Understanding the role of tuft cells in allergic airway disease

Juan Osorio, MD

Memorial Sloan-Kettering Cancer Center Optimization of Fc Effector Activity

of Anti-CD47 Antibodies for Cancer Immunotherapy

Kartik Pattabiraman, MD, PhD Yale University

Developmental disruption of prefrontal circuits as the neurodevelopmental etiology of schizophrenia

Jessica Queen, MD, PhD Johns Hopkins University School of Medicine A Microbiota-Induced Switch to Immune Checkpoint Inhibitor

Responsiveness in Colon Cancer

Carolyn Sangokoya, MD, PhD University of California-San Francisco Illuminating post-transcriptional

control of stem cell fate and function

ADVISORY COMMITTEE

Derek Abbott, MD, PhD (Co-Chair) Case Western Reserve University

Geoffrey Aguirre, MD, PhD Hospital of the University of Pennsylvania

Leslie J. Berg, PhD University of Colorado School of Medicine

Chester W. Brown, MD, PhD University of Tennessee Health Science Center

Paul Buckmaster, DVM, PhD Stanford University

Kathleen H. Burns, MD, PhD Harvard Medical School

Kathleen Caron, Ph.D. (Co-Chair) University of North Carolina-Chapel Hill

Jeanine D'Armiento, MD, PhD Columbia University

Seth Field, MD, PhD Case Western Reserve University

Sarah H. Lisanby, MD National Institute of Mental Health

Heather C. Mefford, MD, PhD St. Jude Children's Research Hospital

Jay Sarthy, MD, PhD Fred Hutchinson Cancer

Research Center

Interrogation of Pathological Histone Dynamics to Identify Drivers of Tumor Heterogeneity and Therapeutic Vulnerabilities

Christina Theodoris, MD, PhD Harvard Medical School

Transfer learning leveraging largescale single cell transcriptomics to enable predictions in settings with limited data

Josephine Thinwa, MD, PhD University of Texas Southwestern Medical Center-Dallas The Function of CDKL5 in autophagy and host antiviral defense

W. Kimryn Rathmell, MD, PhD Vanderbilt University Medical Center

Upinder Singh, MD Stanford University School of Medicine

Barry Sleckman, MD, PhD University of Alabama-Birmingham

CAREER AWARD FOR STEM TEACHERS

The Career Award for STEM Teachers (CAST) awards outstanding public school STEM teachers. The goal of this program is to enhance the professional development of these teachers to create mentors and innovators within the NC STEM community.

CAST provides \$175,000 over 5 years with the following annual allotments: \$10,000 stipend to supplement the teacher's annual salary or benefits; \$10,000 for equipment or supply purchases for the classroom; \$10,000 for professional development including travel and registration to meetings or conferences; \$5,000 will be held annually and given to the teacher at the end of five years if they remain in a NC K-12 classroom. Up to 6 awards are available annually. Candidates must be licensed North Carolina K-12 STEM public school teachers and demonstrate superior knowledge of STEM, excellent teaching skills, leadership, at least five years of teaching experience in North Carolina K-12 public schools with a commitment to remain in the NC public school system.

Special consideration will be given to teachers working in hard-to-staff, economically deprived classrooms in North Carolina. Special consideration will also be given to efforts that integrate environmental science and the impact of climate change into the STEM curriculum.

ADVISORY COMMITTEE

David Marsland Discovery Education Angela Quick, EdD RTI International Honorable Bobbie Richardson, EdS North Carolina General Assembly

CLIMATE AND HEALTH INTERDISCIPLINARY AWARDS

The Climate and Health Interdisciplinary Award (CHI) aims to drive new collaborations in research investigating the effects of climate change on human health. Temperature, ecological and population changes caused by shifts in climate have an impact on human health that cannot be assessed through a single science. This program's objective is to create novel interdisciplinary research through the collaboration of experts from fields that do not typically interact.

CHI provides \$375,000 over 3 years to an individual investigator or to multi-investigator teams. Postdoctoral trainees nearing transition to independence and early career faculty are encouraged to apply. Candidates must be at a private or public non-profit organization in the US or Canada; research teams may include members from beyond the US and Canada. Proposals must include a collaboration between basic/ applied biomedical sciences and disciplines outside of biomedical sciences (eg. field ecology, agricultural sciences, geological and planetary sciences, architecture, engineering, applied social sciences) to assess or mitigate the effects of climate change on human health. Examples of projects might include, but are not limited to, the role of climate change in exacerbating vector-borne diseases, a predictive model on the impact of climate change on vulnerable populations, or a neighborhood initiative to support use of local green space and increase physical activity.

CLIMATE CHANGE AND HUMAN HEALTH SEED GRANTS

The Climate Change and Human Health Seed Grants (CCHH) help form new collaborations between largely disconnected fields of research for the purpose of studying the impact of climate change on human health. These small, early-stage grants connect researchers in the basic science/biomedical field with those in ecological, environmental, earth science or in populationbased fields (epidemiology, public health, economics and urban planning).

CCHH awards \$2,500-\$50,000 over 1 year. \$1M was dedicated to support this program. Candidates must be

at a non-profit organization in the U.S. or Canada. Proposals can be submitted for collaborations between different institutions. Proposals from a single institution must aim to develop partnerships that do not readily form or exist.

Additional areas of interest include, but are not limited to, the development of sustainable health care systems, preparation for extreme weather or other crises that would directly affect health or the delivery of health care, public education on climate change.

CAREER GUIDANCE FOR TRAINEES

The Career Guidance for Trainees (CGT) award supports innovative projects aimed at teaching graduate trainees the practical skills needed for transition to independent research. These skills may include project management, managing people, and communication skills. Proposals should allow trainees to assess their strengths and/or help them connect with potential employers. CGT awards \$15,000-25,000 over one year to non-profit organizations. BWF aims to support pilot projects or ideas with the potential of expansion and growth.

GRADUATE DIVERSITY ENRICHMENT PROGRAM

The Graduate Diversity Enrichment Program (GDEP) aims to support the career development of young scientists who belong to underrepresented minorities. BWF believes that diversity in the workforce leads to innovation and advancement. GDEP enhances the graduate student experience by increasing exposure to professional environments and by making candidates more competitive as they pursue a career in academic research. Funds support travel and participation in conferences, workshops, courses, training and networking as well as equipment and supplies related to the research. GDEP provides a total of \$5,000 over two years to PhD students at an NC institution of higher education, who belong to an underrepresented minority (American Indian or Alaska Native, Black or African American, Hispanic, or Native Hawaiian or other Pacific Islander). Up to 10 awards will be granted from 2021-2023. Candidates must be full-time graduate STEM students within their 2nd to 5th year of study at the time of the application. They must be citizens of the US or Canada.

2022 AWARDEES

Ashley Aguillard

University of North Carolina-Chapel Hill Elucidating the role of ankyrin-B in brown adipose tissue function and energy balance

David Aponte Diaz

University of North Carolina-Chapel Hill Membrane and lipidome dynamics during Enterovirus infection

Danielle Brathwaite, PhD Candidate

University of North Carolina-Chapel Hill Emergency Department-Based Psychiatric Services for Children and Adolescents: An In-depth Investigation of Care in North Carolina

Danielle Chappell, PhD Candidate

University of North Carolina-Chapel Hill Characterizing the impact of a cellular doubinuiting on the lifequals of Kappei's

deubiquitinase on the lifecycle of Kaposi's Sarcoma-associated Herpesvirus

Jeliyah Clark

University of North Carolina-Chapel Hill Nutritional modulation of fetal susceptibility to prenatal inorganic arsenic exposure

Marta Cruz Cisneros

University of North Carolina-Chapel Hill Genetic Regulation of Antibody Response to Adjuvanted Vaccination

Austin Maduka Duke University

Defining Novel Roles of Ubiquitin Accumulation during the Mammalian Oxidative Stress Response

Carmen Marable, PhD Candidate

University of North Carolina-Chapel Hill The Role of the Placenta-Brain-Axis in Children's Neurodevelopment

Jamshaid Shahir

University of North Carolina-Chapel Hill Cell Cycle Remodeling During Human Embryonic Stem Cell Differentiation

Ellysa Vogt

University of North Carolina-Chapel Hill Developing an extremophile yeast model for new insights into septin assembly at the membrane

Shunafrica White

North Carolina A&T State University The Effects of Diabetes on the Mechanical Properties of Patellar Tendon

INNOVATION IN REGULATORY SCIENCE AWARD

Regulatory science is a relatively novel field that provides a solid scientific foundation for the development of laws and regulations. The goal of the Innovation in Regulatory Science Award (IRSA) is to support this emerging field as it tries to keep up with advances in biomedical science and technology. This program funds research that explores new approaches in regulatory science that would ultimately inform FDA regulatory decisions.

IRSA provides up to \$500,000 over five years to an investigator at the adjunct, assistant, associate or full professor level at a non-profit, degree-granting institution in the US or Canada. Candidates must hold an MD, PhD, DVM, DDS, DO, DPhil, PharmD, or MD-PhD degree. BWF encourages, but does not limit, applications to those that support the FDA's priorities: regenerative medicine (including gene therapy), artificial intelligence and machine learning, digital health, reduction of animal testing, and model-informed product development. Research proposals may draw from the following areas: mathematics, computer science, applied physics, medicine, engineering, toxicology, epidemiology, biostatistics, systems pharmacology, and food safety and nutrition. Applications from women, underrepresented minorities, underrepresented geographical regions, persons with disabilities, and persons from disadvantaged backgrounds are strongly encouraged.

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Wendy R. Sanhai, PhD, MBA Deloitte Consulting, LLP Duke University University of Maryland Christy L. Shaffer, PhD Hatteras Venture Partners Hatteras Discovery

Alastair J.J. Wood, MD (Chair) Weill Medical College of Cornell University Symphony Capital, LLC

INVESTIGATORS IN THE PATHOGENESIS OF INFECTIOUS DISEASES

The Investigators in the Pathogenesis of Infectious Diseases (PATH) award provides an opportunity for the mid to late level assistant professor to pursue high-risk, high-reward research projects and become an innovator in the field of infectious diseases. The goal of this program is to advance our understanding of disease pathogenesis through a multidisciplinary approach that combines areas of research such as biochemistry, pharmacology, immunology and molecular biology.

This competitive award provides \$500,000 over 5 years to an individual investigator with an established record of independent research. Candidates must be citizens, permanent or temporary residents of the U.S. or Canada at an accredited, degree-granting institution in the U.S. or Canada.

BWF encourages submissions studying all types of pathogens (bacterial, viral, fungal, etc.) and their underlying mechanisms of infection, colonization or commensalism at the molecular or systemic level.

BWF welcomes applications in the following areas: under-studied infectious diseases; fungal, protozoan, and metazoan diseases; vector biology; veterinary research with animal models of human disease. Additionally, research studying links between climate change and pathogen-host interactions is encouraged. Applications from women and underrepresented minorities are strongly encouraged.

2022 AWARDEES

Jonathan Abraham, MD, PhD

Harvard Medical School Molecular evolution of viral receptor-binding domains

Salvador Almagro-Moreno, PhD

University of Central Florida Disentangling pathoadaptations in emergent pathogens: The Vibrio vulnificus paradigm

Sophie Helaine, PhD

Harvard Medical School Dynamics and role of DNA accumulation in Salmonella persisters during infection

Steven Josefowicz, PhD

Weill Medical College of Cornell University Epigenetic regulation of immunity: molecular mechanisms of inflammatory priming and altered hematopoiesis

Christopher LaRock, PhD

Emory University School of Medicine Keratinocyte pyroptosis guards against invasive bacteria

Vineet Menachery, PhD

University of Texas Medical Branch-Galveston The Role of Glycosylation in Coronavirus Spreading Events

Michael Reese, PhD

University of Texas Southwestern Medical Center-Dallas

Mechanisms of self-assembly and dynamics of the Apicomplexan apical invasion & secretion machinery

Rebecca Voorhees, PhD

California Institute of Technology Novel host factors for viral membrane protein biogenesis

Taia Wang, MD, PhD Stanford University Biology of afucosylated SARS-CoV-2 IgGs

Emily Wong, MD

University of Alabama-Birmingham Interactions between the human host and M.tb during subclinical tuberculosis

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Craig E. Cameron, PhD University of North Carolina-Chapel Hill

Blossom Damania, PhD (Co-Chair) University of North Carolina-Chapel Hill

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Christopher A. Hunter, PhD University of Pennsylvania School of Veterinary Medicine

Denise Kirschner, PhD University of Michigan School of Medicine

Carolina Lopez, PhD Washington University School of Medicine Eric G. Pamer, MD University of Chicago

Barbara Papadopoulou, BPharm, PhD, FCAHS CHU de Quebec Research Center Laval University School of Medicine

Eric Skaar, PhD, MPH (Co-Chair) Vanderbilt University Medical Center

Vanessa Sperandio, PhD University of Texas Southwestern Medical Center

NEXT GEN PREGNANCY INITIATIVE

The Next Gen Pregnancy Initiative (NGPI) aims to support individual investigators or multi-investigator teams studying the underlying mechanisms of healthy pregnancy and adverse peri-natal outcomes. It encourages innovation through the collaboration between translational scientists (in the fields of genetics/genomics, immunology, microbiology, evolutionary biology, mathematics, engineering and other basic sciences) and reproductive scientists with an expertise in maternal-fetal medicine, obstetrics, and pediatrics.

NGPI provides up to \$500,000 over four years. The award supports all levels of an investigator's career from postdoctoral fellow nearing transition to independent investigator to senior, established investigator. Candidates must be citizens, permanent or temporary residents of the U.S. or Canada at public or private non-profit organizations. Research teams applying for this award need to have at least one member with training or expertise outside the traditional areas of reproductive medicine. Collaborations between institutions are welcome.

BWF encourages applications studying the development of therapeutic interventions, new diagnostic, screening and real time data capture tools. Particular areas of interest include climate change and the environmental impact on pregnancy, complications associated with ART, epigenomewide association studies, preterm birth risk stratification using AI and machine learning, and biological mechanism underlying racial disparities in adverse pregnancy outcomes.

2022 AWARDEES

Yalda Afshar, MD, PhD

University of California-Los Angeles Noninvasive Prenatal Diagnostics for Placenta Accreta Spectrum Disorders

David Archer, PhD

Emory University Defining the Drivers of Poor Pregnancy Outcomes in Sickle Cell Disease

Jacqueline Ho, MD

Children's Hospital of Pittsburgh Prenatal programming of long-term kidney health by in utero exposure to maternal diabetes

Lisa Joss-Moore, PhD

University of Utah Uteroplacental Insufficiency Disrupts Placental-Fetal Lipid Regulation and Dynamics

ADVISORY COMMITTEE

Irina Burd, MD, PhD University of Maryland School of Medicine

Laura Ensign, PhD Johns Hopkins University

Susan Fisher, PhD University of California-San Francisco

Kellie Jurado, PhD

University of Pennsylvania Perelman School of Medicine

Immunological functions of fetal red blood cells during pregnancy

Vincent Lynch, PhD State University of New York-Buffalo Evolution of human specific pregnancy traits

Monica Mainigi, MD

University of Pennsylvania The Role of Estrogen Metabolites in Abnormal Placentation

Elze Rackaityte, PhD

University of California-San Francisco Antibody Surveillance of Human Development for Preterm Birth Diagnostics and Prevention

Tippi C. MacKenzie, MD University of California-San Francisco

Amy P. Murtha, MD

Rutgers, the State University of New Jersey-New Brunswick

Mana Parast, MD, PhD University of California-San Diego

Jian Shu, PhD

Massachusetts General Hospital Prediction of Preterm Birth through Single-Cell Genomics and Machine Learning

Chandrasekhar Yallampalli, PhD Baylor College of Medicine

Transcriptome and proteome profiling to evaluate role of placenta specific complement activation in preeclampsia and fetal growth restriction

Hyagriv N. Simhan, MD, MS University of Pittsburgh School of Medicine

Jerome F. Strauss, III, MD, PhD (Chair) Virginia Commonwealth University

POSTDOCTORAL DIVERSITY ENRICHMENT PROGRAM

The Postdoctoral Diversity Enrichment Program (PDEP) aims to enhance the postdoctoral experience for trainees who belong to an underrepresented minority. BWF understands that innovative and cutting-edge research requires collaboration amongst a diverse pool of scientific minds. PDEP supports funding research-related activities (workshops, courses, travel, collaborations, training in new techniques), enhancing the postdoctoral supervisor-trainee relationship (career guidance, research guidance, annual mentor meeting hosted by BWF), and increasing networking with peers. The program is not a research grant and is not meant to support or supplement the trainee's salary.

PDEP provides a total of \$60,000 over 3 years to postdoctoral trainees at degree-granting institutions in the

US and Canada, who belong to an underrepresented minority (American Indian or Alaska Native, Black or African American, Hispanic, or Native Hawaiian or other Pacific Islander). Up to 15 awards are granted annually. Candidates must be within 5 years of their PhD, must have secured a postdoctoral position with funding and must have no more than 48 months of postdoctoral experience at the time of application. Candidates must be citizens of the US or Canada. They must devote at least 75% of their time to research.

Applicants must conduct research in the biomedical or medical sciences. Proposals in health services research or involving large-scale clinical trials are ineligible.

2022 AWARDEES

Chinyere Agbaegbu Iweka, PhD

Stanford University Effects of circadian disruption on immunometabolism and stroke severity

Hector Arciniega, Jr.

Harvard Medical School Identifying in vivo neuroimaging biomarkers of chronic traumatic encephalopathy

Danielle Atibalentja, M.D., PhD

Stanford University Mechanisms of Regulation of B-cell immune responses by Oncogenic MYC

Heather Beasley, PhD

Vanderbilt University TMEM135 is a Novel Regulator of Ageassociated Heart Decline

Maigen Bethea, PhD

University of Colorado Anschutz Medical Campus The Role of OxtR Vagal Afferents in the Success of Vertical Sleeve Gastrectomy

Lawrence Brown, M.D.

Johns Hopkins University The effect of structural racism on racial and geographic disparities in deceased organ donation

Jasmin Camacho, PhD

Stowers Institute for Medical Research The sweet adaptations to sugar: extreme physiological evolution to liquid sugar diets in nectar bats and hummingbirds

Kate Cavanaugh, PhD

University of California-San Francisco Advancing the Mouse Developmental Clock to Assess Embryonic Checkpoint Progression

Rose Creed, PhD

University of California-San Francisco Basal Ganglia and Eye Movement Circuits in Motor control

Lola Fagbami, PhD

University of Georgia Sweet Danger: Sugar Modified Proteins in Malaria Parasites

Aileen Fernandez, PhD Yale University

Employing spatially-conserved gene expression for improve selection of patients for immunotherapies

Diego Gelsinger, PhD

Columbia University Versatile Technology for Universal Engineering of Microbial Isolates and Communities

Stephanie Herrlinger, PhD

Columbia University A multi-systems approach to uncover aberrant mechanisms contributing to circuit dysfunction

in Schizophrenia Malina Ivey, PhD

University of Cincinnati

Investigating the long-term consequence of fibroblast activation on cardiac physiology

Zachary Jones, PhD

St. Jude Children's Research Hospital Locus coeruleus norepinephrine signaling in alcohol seeking and binge-like drinking

Demetrice Jordan, PhD

Harvard Medical School A Spatial Risk Assessment of COVID-19 Infections and Seroprevalence in Ifanadiana District Madagascar with Implications on Early Warning Systems of Surveillance

Jasmine Kwasa, PhD

Carnegie Mellon University Developing Novel Neural Technologies to Investigate Top-Down Attention in Neurologically and Racially Heterogeneous Populations

2022 AWARDEES - CONT'D

Lakeisha Lewter, PhD

University of Texas-Dallas The contribution of the left and right amygdala on the development of chronic bladder pain

Christopher Medina, PhD

Emory University Defining the unique classes of inhibitory receptor molecules during CD8 T cell exhaustion

Nikea Pittman, PhD

University of North Carolina-Chapel Hill Defining the complete RclC pathway for Detoxifying Oxidative Stress

Anny Reyes, PhD Candidate

University of California-San Diego Social Determinants of Health in Older Adults with Epilepsy: Identifying the impact of SDH on epilepsy, cognitive, and brain outcomes

Cristina Santarossa, PhD

New York University School of Medicine Structure and Function of LetAB: A tunnelbased lipid transporter in E. coli

Dominique Stephens, PhD

Vanderbilt University DUSP11 Modulates Intracellular and Neighboring Cells Immunogenicity and Inflammation Sensitivity

Cynthia Tchio, PhD

Morehouse School of Medicine The Implication of the Orphan GPR61 in Sleep and Cardiometabolism

Andre Toussaint, PhD

Columbia University Genes, molecules, and mechanisms associated with heightened pain sensitivity and opioid abuse vulnerability

Adelaide Tovar, PhD

University of Michigan-Ann Arbor Dissecting context-specific gene regulatory grammars

ADVISORY COMMITTEE

Ishmail Abdus-Saboor, PhD Columbia University

Joey V. Barnett, PhD Vanderbilt University

Kami Kim, MD (Chair) University of South Florida Markita del Carpio Landry, PhD University of California-Berkeley

George M. Langford, PhD Syracuse University **Gina R. Poe, PhD** University of California-Los Angeles

Blanton S. Tolbert, PhD Case Western Reserve University

PROMOTING INNOVATION IN SCIENCE AND MATHEMATICS

The Promoting Innovation in Science and Mathematics award high-quality, hands-on STEM activities for the teacher in the K-12 classroom. This program covers the cost of equipment and supplies to implement these activities into the curriculum with the goal of stimulating an interest in science and mathematics in K-12 students.

This award provides up to \$3,000 for one year to teachers with a professional educator's license to teach in a North Carolina K-12 public school. BWF aims to support pilot projects or ideas with the potential of expansion and growth.

RESIDENT FACULTY SCHOLAR

The Resident Faculty Scholar Grant Program will support a faculty member, or small groups of faculty members, at institutions in the United States or Canada, to utilize BWF Headquarters as a site for mini-sabbaticals/project incubation allowing the dedicated protected time to initiate or accelerate their work when aligned with BWF priorities and goals. The nature of the mini-sabbaticals/ project incubation sessions will be quite flexible and

would be envisioned to support work at the BWF Headquarters for two to 6 months. Funds would be available to support travel, lodging, meetings, and faculty salary. We anticipate two proposals to be awarded in the first year of applications. Office space, computer access, meeting facilities. and other dry laboratory resources would be available on site. We encourage all stages of seniority of faculty to apply.

SCIENCE AND THE ARTS

The connection between science and the arts is often overlooked, but it is essential to the advancement of knowledge and creativity. Both fields share a common goal of understanding the world around us and exploring new ideas.

Science provides a framework for understanding the physical world, while the arts provide a platform for expressing ideas and emotions. However, the two fields are not mutually exclusive. In fact, they often intersect and influence each other in unexpected ways.

This connection is crucial for addressing complex societal challenges. For instance, climate change is a complex

issue that requires both scientific understanding and creative solutions. Scientists can provide data and research to inform policy decisions, while artists can use their platforms to communicate the urgency of the issue and inspire action.

In education, integrating science and the arts can enhance student learning and engagement. Hands-on, interdisciplinary projects that combine science and art can help students develop critical thinking skills and creativity, while also fostering a deeper appreciation for both fields.

SCIENCE AND PHILANTHROPY

The Burroughs Wellcome Fund makes noncompetitive grants for activities and career development opportunities for scientists that fall outside of our competitive award programs, but are closely related to our targeted areas.

We place special priority on working with nonprofit organizations, including government agencies, to leverage financial support for our targeted areas of research, and on encouraging other foundations to support biomedical research. Proposals must be vetted with the Communications Team (communications@ bwfund.org) prior to submission and review. Applicants should describe the focus of the activity, the expected outcomes, and the qualifications of the organization or individuals involved; provide certification of the sponsor's Internal Revenue Service tax-exempt status; and give the total budget for the activity, including any financial support obtained or promised. Proposals are given careful preliminary review, and those deemed appropriate are presented for consideration by BWF's Board of Directors.

SCIENCE COMMUNICATION

Since 2020, the Burroughs Wellcome Fund has established science communication as an area of strategic focus and has increased financial investment and commitment in this area. BWF awards noncompetitive grants (ad hocs) for science communication and science in the arts activities. BWF supports a broad range of initiatives around science communication and science in the arts that are ideally aligned with our larger portfolio programs and strategic initiatives. Proposals should be focused on one or several of the following areas: foster a prioritization of science communication planning and strategy among BWF audiences; promote science journalism and communication to encourage conversations and engagement of science in civic life; strategies to deter misinformation in science communication; and initiatives that promote and inspire the wonder, awe, and promise of science.

Proposals must be vetted with the Science Communication program team (communications@bwfund.org) prior to submission and review.

STUDENT STEM ENRICHMENT PROGRAM

The Student STEM Enrichment Program (SSEP) supports the creation and implementation of an after school/ weekend/summer science enrichment program which would increase K-12 students' understanding and appreciation of STEM subjects and encourage them to pursue a career in research. SSEP awards up to \$180,000 over three years to a non-profit organization in North Carolina. The proposed program must align with the North Carolina Standard Course of Study for science and mathematics pertinent to the grade levels of the student participants.

2022 AWARDEES

Campbell University

Academy for Emerging Scholars Exploring Clinical Research and Pharmaceutical Science Careers

Duke University

Duke Research in Engineering Program

Elizabeth City State University

Introducing North Carolina Youth to Marine Science Careers and Critical Issues

ADVISORY COMMITTEE

Rocio Anderson

North Carolina Society of Hispanic Professionals

John E. Burris, PhD Burroughs Wellcome Fund

Fayetteville State University

Fayetteville State University's STEM Enrichment and Exploration Camp

North Carolina A&T State University The STEM of Polymers: A summer program in STEM Exploration for Middle School students

North Carolina State University Falls Lake Partners in Forensic Science II

Pisgah Astronomical Research Institute 3D Planets

Public Schools of Robeson County Kids Who Code Robotics

University of North Carolina-Asheville Insects Everywhere: Closing the STEM Achievement Gap for Migrant Children

Valence Robotics Valence Robotics FIRST Robotics Competition

Yolanda Comedy, PhD American Association for the Advancement of Science

Connie Locklear Public Schools of Robeson County

Eric D. Packenham US Department of Education Utah State University Celestine Pea, PhD STEM Education Consultant

William Franklin Scott Sr. Retired, High School and Middle School Principal

REPORT ON FINANCE

The Burroughs Wellcome Fund's investments totaled \$768.1 million at August 31, 2022, the end of our fiscal year. BWF's primary financial goal is to pursue an investment strategy that will support annual spending needs and maintain a constant real level of assets over the long term. To achieve this goal, a high percentage of our investments are placed in strategies that derive the bulk of their returns from exposure to U.S. and international capital markets. Hence, fluctuations in BWF's investment results will be due largely to variability in capital market returns. BWF's investment policies are developed with the recommendations and review of the Investment Committee, which is appointed by and reports to BWF's Board of Directors. The committee, which meets three times a year, has seven voting members, including five representatives from outside BWF and two representatives of our board. The board's chair, BWF's president, and BWF's vice president for finance also serve on the committee as nonvoting members.

As part of BWF's investment strategy, we have established "allocation targets"—that is, percentages of our total assets to be invested in particular asset classes. Investment managers hired by BWF pursue more focused mandates within each sector. As of the end of the fiscal year, BWF's asset mix and market values were:

- U.S. large capitalization equity assets had a market value of \$146.4 million. The sector's target allocation was 20 percent, and actual holdings stood at 19 percent.
- U.S. small capitalization equity assets had a market value of \$136.5 million. The sector's target allocation was 14 percent, and actual holdings stood at 18 percent.
- International equity assets had a market value of \$153.6 million. The sector's target allocation was 22 percent, and actual holdings stood at 20 percent.
- Fixed income assets had a market value of \$118.9 million. The sector's target allocation was 13 percent, and actual holdings stood at 15.4 percent.
- Cash equivalent assets had a market value of \$11.9 million. The sector's target allocation was 1 percent, and actual holdings stood at 2 percent.
- Alternative assets had a market value of \$200.8 million. The sector's target allocation was 30 percent, and actual holdings stood at 26.6 percent.

The total market value of BWF's investments decreased by \$168 million, or 18 percent, from the end of the previous fiscal year. This decrease in assets was due mainly to negative returns for world equities and bonds during the fiscal year. BWF's total investment return before investment management fees for the fiscal year was -11.9 percent. The U.S. large capitalization equity sector returned -16.1 percent, the U.S. small capitalization equity sector had a -14.9 percent loss, the international equity sector returned -24.5 percent for the fiscal year, and fixed income produced a -7.6 percent result.

As of August 31, 2022, BWF employed 16 marketable securities investment managers. In the U.S. large capitalization equity sector, the managers were Brown Advisory; LSV Asset Management; and Martingale Asset Management. BMO Asset Management, Loomis Sayles, Bridge City Asset Management and Essex Investment Management managed U.S. small capitalization equities. Camden Asset Management; C.S. McKee; Rimrock Capital Management; Barings; and Amundi Pioneer were the fixed income managers. Capital Guardian Trust Company; Hardman Johnston Global Advisors; Acadian Asset Management; and Hansberger Growth Investors managed international equities. BWF also held investments in four venture capital funds: Intersouth Partners VI, Spray Venture Funds I and II and Mission Ventures II. Winston Partners managed a fund of equity oriented hedge funds. Blackrock Alternative Advisors managed a fund of absolute return strategies. Hamilton Lane Advisors managed five funds of private equity strategies and four private debt strategies. Dyal Capital managed two private equity funds. Neuberger Berman managed an insurance linked strategy and a private equity strategy. Harbourvest managed two private equity strategies. Finally, the Fund internally managed a diversified portfolio of mainly passive investments which was named the Tactical Portfolio. The Tactical Portfolio included investments in U.S. equities, international equities and global bonds.

STATEMENTS OF FINANCIAL POSITION

AUGUST 31, 2022 AND 2021 (all dollar amounts presented in thousands)

	2022	2021
ASSETS		
Cash and cash equivalents	\$ 2,495	\$ 2,547
Investments	768,062	936,107
Accrued interest and dividends receivable	801	1,262
Other assets	774	146
Property and equipment, net	6,505	6,742
Total assets	\$ 778,637	\$ 946,804
LIABILITIES AND NET ASSETS		
Transactions payable, net	\$ 3,942	\$ 6,442
Accounts payable and other liabilities	1,003	1,115
Excise tax payable	765	1,370
Deferred federal excise taxes	1,395	3,533
Unpaid awards	106,683	110,312
Total liabilities	113,788	122,772
Unrestricted net assets	664,849	824,032
Total liabilities and net assets	\$ 778,637	\$ 946,804

STATEMENTS OF ACTIVITIES

AUGUST 31, 2022 AND 2021 (all dollar amounts presented in thousands)

	2022	2021
REVENUES		
Interest and dividends, less investment expenses of \$3,741 and		
\$3,622 in 2022 and 2021, respectively	\$ 6,023	\$ 6,120
Net realized gain on sale of investments	37,454	75,998
Total revenues and realized gains	\$ 43,477	\$ 82,118
EXPENSES		
Program services	\$ 29,957	\$ 36,713
Management and general	7,303	7,177
Total expenses before net unrealized appreciation		
(depreciation) and deferred federal excise tax	37,260	43,890
Net unrealized appreciation (depreciation) of investments,		
net of provision for deferred federal excise tax benefit / (expense)		
of \$2,138 and \$(1,413) in 2022 and 2021, respectively	(165,400)	106,098
Change in net assets	(159,183)	144,326
Net assets at beginning of year	824,032	679,706
Net assets at end of year	\$ 664,849	\$ 824,032

GRANT AWARDEE INDEX

BWF makes all grants to nonprofit organizations. For most of the programs, the name of the individual on whose behalf the grant is made is listed first, the title of the award recipient's project is listed second, and the name of the organization that received the money is listed third.

For programs that may have coaward recipients, the award recipients and their organizations are listed first, followed by the project title. For grants made directly to organizations and not on behalf of an individual, the name of the organization is listed first, followed by the title of the project or a brief description of the activity being supported.

In addition to making competitive awards, BWF makes noncompetitive grants—Ad Hocs—for activities that are closely related to our major focus areas. These grants are intended to enhance the general environment for research in the targeted areas.

For full audited financials visit bwfund.org/annualreport

PROGRAM SUMMARY

AUGUST 31, 2022

	Awarded Net of Cancelled		Amount Paid		Percentage of Total Paid	
BIOMEDICAL SCIENCES						
Career Awards in the Medical Sciences	\$	10,568,296	\$	6,266,250		
Physician-Scientist Institutional Award		_		2,500,000		
Research Travel Grant		7,500		7,500		
Ad Hoc		982,175		848,726		
Total	\$	11,647,972	\$	9,747,476	28.6%	
CLIMATE CHANGE AND HUMAN HEALTH						
Ad Hoc	\$	757,472		757,472		
Total	\$	757,472	\$	757,472	2.2%	
DIVERSITY IN SCIENCE						
Graduate Diversity Enrichment Program	\$	55,000	\$	27,500		
Postdoctoral Diversity Enrichment Program		1,421,135		952,918		
Ad Hoc		2,639,299		2,309,983		
Total	\$	4,115,434	\$	3,290,401	9.7%	
INFECTIOUS DISEASES						
Career Guidance	\$	_	\$	37,495		
Investigators in Pathogenesis of Infectious Disease		5,000,000		4,700,000		
Ad Hoc		2,324,197		1,995,197		
Total	\$	7,324,197	\$	6,732,692	19.8%	
INTERFACES IN SCIENCE						
Career Award at the Scientific Interface	\$	4,348,635	\$	4,166,584		
Ad Hoc		348,801		1,064,801		
Total	\$	4,697,436	\$	5,231,385	15.4%	

PROGRAM SUMMARY

AUGUST 31, 2022

	Awarded Net of Cancelled		Amount Paid		Percentage of Total Paid	
REGULATORY SCIENCE						
Innovation in Regulatory Science Awards	\$	_	\$	1,450,000		
Ad Hoc		340,000		340,000		
Total	\$	340,000	\$	1,790,000	5.3%	
REPRODUCTIVE SCIENCES						
Next Gen Pregnancy Initiative	\$	4,953,537	\$	2,313,485		
Total	\$	4,953,537	\$	2,313,485	6.8%	
SCIENCE AND PHILANTHROPY						
Ad Hoc	\$	1,544,913	\$	1,579,913		
Total	\$	1,544,913	\$	1,579,913	4.6%	
SCIENCE EDUCATION						
Career Award for Science and Mathematics Teachers	\$	_	\$	410,000		
Student STEM Enrichment Program		1,488,905		1,164,990		
Ad Hoc		1,057,202		1,010,702		
Total	\$	\$2,546,107	\$	2,585,692	7.6%	
GRAND TOTAL	\$	37,847,068	;	34,028,517	100%	

BIOMEDICAL SCIENCES

Career Awards for Medical Scientists

Alice Cheng, MD, PhD

Stanford University

Engineering a synthetic microbial community for research and treatment of Nonalcoholic steatohepatitis

Theodore Drivas, MD, PhD

University of Pennsylvania

Discovering molecular and genetic mechanisms of ciliary signaling in common disease

William Freed-Pastor, MD, PhD

Harvard Medical School Overcoming T cell exclusion to augment immunotherapy in pancreatic cancer

Alexander Gitlin, MD, PhD Stanford University

Insights from complex immune disorders: how an apoptotic caspase unleashes inflammation

Gil Hoftman, MD, PhD

University of California-Los Angeles

Imaging transcriptomics across developmental stages of early psychotic illness

William Hwang, MD, PhD

Harvard Medical School

Identifying key regulators of the neuronallike malignant phenotype and tumor-nerve crosstalk in pancreatic cancer

Residence Faculty Scholar

Michael Ferdig, PhD

University of Notre Dame Traversing barriers: Extending the Reach and Relevance of Laboratory Science

Maya Kotas, MD, PhD

University of California-San Francisco Understanding the role of tuft cells in allergic airway disease

Juan Osorio, MD

Memorial Sloan-Kettering Cancer Center Optimization of Fc Effector Activity of Anti-CD47 Antibodies for Cancer Immunotherapy

Kartik Pattabiraman, MD, PhD Yale University

Developmental disruption of prefrontal circuits as the neurodevelopmental etiology of schizophrenia

Jessica Queen, MD, PhD

Johns Hopkins University School of Medicine

A Microbiota-Induced Switch to Immune Checkpoint Inhibitor Responsiveness in Colon Cancer

Carolyn Sangokoya, MD, PhD

University of California-San Francisco Illuminating post-transcriptional control of stem cell fate and function

Jay Sarthy, MD, PhD

Fred Hutchinson Cancer Research Center

Interrogation of Pathological Histone Dynamics to Identify Drivers of Tumor Heterogeneity and Therapeutic Vulnerabilities

Christina Theodoris, MD, PhD Harvard Medical School

Transfer learning leveraging large-scale single cell transcriptomics to enable predictions in settings with limited data

Josephine Thinwa, MD, PhD

University of Texas Southwestern Medical Center-Dallas

The Function of CDKL5 in autophagy and host antiviral defense

DIVERSITY IN SCIENCE

Graduate Diversity Enrichment Program

Ashley Aguillard

University of North Carolina-Chapel Hill Elucidating the role of ankyrin-B in brown adipose tissue function and energy balance

David Aponte Diaz

University of North Carolina-Chapel Hill Membrane and lipidome dynamics during Enterovirus infection

Danielle Brathwaite, PhD Candidate

University of North Carolina-Chapel Hill Emergency Department-Based Psychiatric Services for Children and Adolescents: An In-depth Investigation of Care in North Carolina

Danielle Chappell, PhD Candidate

University of North Carolina-Chapel Hill Characterizing the impact of a cellular deubiquitinase on the lifecycle of Kaposi's Sarcoma-associated Herpesvirus

Jeliyah Clark

University of North Carolina-Chapel Hill Nutritional modulation of fetal susceptibility

to prenatal inorganic arsenic exposure

Marta Cruz Cisneros

University of North Carolina-Chapel Hill Genetic Regulation of Antibody Response to Adjuvanted Vaccination

Austin Maduka

Duke University Defining Novel Roles of Ubiquitin Accumulation during the Mammalian Oxidative Stress Response

Postdoctoral Diversity Enrichment Program

Chinyere Agbaegbu Iweka, PhD

Stanford University Effects of circadian disruption on immunometabolism and stroke severity

Hector Arciniega, Jr.

Harvard Medical School Identifying in vivo neuroimaging biomarkers of chronic traumatic encephalopathy

Danielle Atibalentja, M.D., PhD

Stanford University Mechanisms of Regulation of B-cell immune responses by Oncogenic MYC

Heather Beasley, PhD

Vanderbilt University TMEM135 is a Novel Regulator of Ageassociated Heart Decline

Maigen Bethea, PhD

University of Colorado Anschutz Medical Campus The Role of OxtR Vagal Afferents in the Success of Vertical Sleeve Gastrectomy Lawrence Brown, M.D.

Johns Hopkins University

The effect of structural racism on racial and geographic disparities in deceased organ donation

Jasmin Camacho, PhD

Stowers Institute for Medical Research The sweet adaptations to sugar: extreme physiological evolution to liquid sugar diets in nectar bats and hummingbirds

Kate Cavanaugh, PhD

University of California-San Francisco Advancing the Mouse Developmental Clock to Assess Embryonic Checkpoint Progression

Rose Creed, PhD

University of California-San Francisco Basal Ganglia and Eye Movement Circuits in Motor control

Lola Fagbami, PhD

University of Georgia Sweet Danger: Sugar Modified Proteins in Malaria Parasites

Carmen Marable, PhD Candidate

University of North Carolina-Chapel Hill The Role of the Placenta-Brain-Axis in Children's Neurodevelopment

Jamshaid Shahir

University of North Carolina-Chapel Hill Cell Cycle Remodeling During Human Embryonic Stem Cell Differentiation

Ellysa Vogt

University of North Carolina-Chapel Hill Developing an extremophile yeast model for new insights into septin assembly at the membrane

Shunafrica White

North Carolina A&T State University The Effects of Diabetes on the Mechanical Properties of Patellar Tendon

Aileen Fernandez, PhD

Yale University

Employing spatially-conserved gene expression for improve selection of patients for immunotherapies

Diego Gelsinger, PhD

Columbia University Versatile Technology for Universal Engineering of Microbial Isolates and Communities

Stephanie Herrlinger, PhD Columbia University

A multi-systems approach to uncover aberrant mechanisms contributing to circuit dysfunction in Schizophrenia

Malina Ivey, PhD

University of Cincinnati Investigating the long-term consequence of fibroblast activation on cardiac physiology

Zachary Jones, PhD

St. Jude Children's Research Hospital Locus coeruleus norepinephrine signaling in alcohol seeking and binge-like drinking

CONTINUED >

DIVERSITY IN SCIENCE

Postdoctoral Diversity Enrichment Program - Cont'd

Demetrice Jordan, PhD

Harvard Medical School

A Spatial Risk Assessment of COVID-19 Infections and Seroprevalence in Ifanadiana District Madagascar with Implications on Early Warning Systems of Surveillance

Jasmine Kwasa, PhD

Carnegie Mellon University

Developing Novel Neural Technologies to Investigate Top-Down Attention in Neurologically and Racially Heterogeneous Populations

Lakeisha Lewter, PhD

University of Texas-Dallas The contribution of the left and right amygdala

I he contribution of the left and right amygdala on the development of chronic bladder pain

Christopher Medina, PhD

Emory University

Defining the unique classes of inhibitory receptor molecules during CD8 T cell exhaustion

Nikea Pittman, PhD

University of North Carolina-Chapel Hill Defining the complete RclC pathway for Detoxifying Oxidative Stress

Anny Reyes, PhD Candidate

University of California-San Diego Social Determinants of Health in Older Adults with Epilepsy: Identifying the impact of SDH on epilepsy, cognitive, and brain outcomes

Cristina Santarossa, PhD

New York University School of Medicine Structure and Function of LetAB: A tunnelbased lipid transporter in E. coli

Dominique Stephens, PhD Vanderbilt University

DUSP11 Modulates Intracellular and Neighboring Cells Immunogenicity and Inflammation Sensitivity

Cynthia Tchio, PhD

Morehouse School of Medicine The Implication of the Orphan GPR61 in Sleep and Cardiometabolism

Andre Toussaint, PhD

Columbia University Genes, molecules, and mechanisms associated with heightened pain sensitivity and opioid abuse vulnerability

Adelaide Tovar, PhD

University of Michigan-Ann Arbor Dissecting context-specific gene regulatory grammars

INFECTIOUS DISEASES

Investigators in the Pathogenesis of Infectious Disease

Jonathan Abraham, MD, PhD

Harvard Medical School Molecular evolution of viral receptor-binding domains

Salvador Almagro-Moreno, PhD

University of Central Florida Disentangling pathoadaptations in emergent pathogens: The Vibrio vulnificus paradigm

Sophie Helaine, PhD

Harvard Medical School Dynamics and role of DNA accumulation in Salmonella persisters during infection

Steven Josefowicz, PhD

Weill Medical College of Cornell University Epigenetic regulation of immunity: molecular mechanisms of inflammatory priming and altered hematopoiesis

Christopher LaRock, PhD

Emory University School of Medicine Keratinocyte pyroptosis guards against invasive bacteria

Vineet Menachery, PhD

University of Texas Medical Branch-Galveston The Role of Glycosylation in Coronavirus Spreading Events

Michael Reese, PhD

University of Texas Southwestern Medical Center-Dallas

Mechanisms of self-assembly and dynamics of the Apicomplexan apical invasion & secretion machinery

Rebecca Voorhees, PhD

California Institute of Technology Novel host factors for viral membrane protein biogenesis

Taia Wang, MD, PhD Stanford University Biology of afucosylated SARS-CoV-2 IgGs

Emily Wong, MD

University of Alabama-Birmingham Interactions between the human host and M.tb during subclinical tuberculosis

INTERFACES IN SCIENCE

Career Awards at the Scientific Interface

William Allen, PhD

Harvard University Reverse-Engineering Brain Aging and Rejuvenation

Sima Asadi, PhD

Massachusetts Institute of Technology Pathogen-Laden Respiratory Droplet Formation via Mucosalivary Fluid Fragmentation

Diego Calderon, PhD

University of Washington

Application of multiplex reporter assays towards understanding trans-acting gene regulation

Gregory Handy, PhD

University of Chicago Developing theoretical neuroscience frameworks to include plasticity from diverse brain cell types

Freeman Lan, PhD University of Wisconsin-Madison

Understanding complex microbial systems using ultrahigh-throughput experimentation, computational modelling, and machinelearning

Maijia Liao, PhD Yale University

Biophysics and Molecular determinants of morphological scaling laws in developing dendrites

Leenoy Meshulam, PhD

University of Washington Bridging scales: from microscopic neural circuitry to macroscopic function

Samantha Petti, PhD

Harvard University Uncovering remote evolutionary links with next-generation homology search

Boyang Qin, PhD

Princeton University Tracing gene expression of single cells across lineages during bacterial biofilm formation and dispersal

Liat Shenhav, PhD

Rockefeller University Early prediction of pregnancy disorders using the vasculature of the eye

Andrew Yang, PhD

University of California-San Francisco Molecular tools to decipher communication across the blood-brain barrier

REPRODUCTIVE SCIENCE

Next Gen Pregnancy Initiative

Yalda Afshar, MD, PhD

University of California-Los Angeles Noninvasive Prenatal Diagnostics for Placenta Accreta Spectrum Disorders

David Archer, PhD

Emory University Defining the Drivers of Poor Pregnancy Outcomes in Sickle Cell Disease

Jacqueline Ho, MD

Children's Hospital of Pittsburgh

Prenatal programming of long-term kidney health by in utero exposure to maternal diabetes

Lisa Joss-Moore, PhD

University of Utah Uteroplacental Insufficiency Disrupts Placental-Fetal Lipid Regulation and Dynamics

Kellie Jurado, PhD

University of Pennsylvania Perelman School of Medicine Immunological functions of fetal red blood cells during pregnancy

Vincent Lynch, PhD

State University of New York-Buffalo Evolution of human specific pregnancy traits

Monica Mainigi, MD University of Pennsylvania

The Role of Estrogen Metabolites in Abnormal Placentation

Elze Rackaityte, PhD

University of California-San Francisco Antibody Surveillance of Human Development for Preterm Birth Diagnostics and Prevention

Jian Shu, PhD

Massachusetts General Hospital Prediction of Preterm Birth through Single-Cell Genomics and Machine Learning

Chandrasekhar Yallampalli, PhD Baylor College of Medicine

Transcriptome and proteome profiling to evaluate role of placenta specific complement activation in preeclampsia and fetal growth restriction

SCIENCE EDUCATION

Student STEM Enrichment Program

Campbell University

Academy for Emerging Scholars Exploring Clinical Research and Pharmaceutical Science Careers

Duke University Duke Research in Engineering Program

Elizabeth City State University Introducing North Carolina Youth to Marine Science Careers and Critical Issues

Fayetteville State University

Fayetteville State University's STEM Enrichment and Exploration Camp

North Carolina A&T State University The STEM of Polymers: A summer program in STEM Exploration for Middle School students

North Carolina State University Falls Lake Partners in Forensic Science II **Pisgah Astronomical Research Institute** 3D Planets

Public Schools of Robeson County Kids Who Code Robotics

University of North Carolina-Asheville

Insects Everywhere: Closing the STEM Achievement Gap for Migrant Children

Valence Robotics

Valence Robotics FIRST Robotics Competition

AD HOC

Biomedical Sciences

Career Development of Postdoctoral Scientists

Campbell University

American Society for Cell Biology Support for the Cell Bio Virtual Meeting 2021, December 1-20, 2021

Case Western Reserve University

Support for Undergraduate Proficiency and Expertise in Research (SUPER)

Federation of American Societies for Experimental Biology

Support for FASEB The Biology of Cilia and Flagella Conference

Johns Hopkins University School of Medicine

Support for the Initiative for Careers in Science and Medicine

Keystone Symposia

Support for Keystone Symposia Diversity Initiatives 2022

Marine Biological Laboratory (MBL)

Support for the 2022-2024 Embryology course: Concepts & Techniques in Modern Developmental Biology

Michigan State University

Support for URM students to attend the 2022 SSR Meeting

Physician-Scientist Support Foundation

Support for the rebuild of the physicianscientist pipeline, starting with medical students

Society for Neuroscience

Support for SfN Trainee Professional Development Awards and Journal Club Awards to Postdoctoral Authors

Medical Sciences

American Physician Scientists Association (APSA) Support for the American Physician

Support for the American Physician Scientists Association - 2021-2022

American Society for Clinical Investigation

Support for the ASCI/AAIM Research Pathway Directors Annual Workshop

Association for Clinical and Translational Science

Support for the 2022 Translational Science Meeting, April 20-22, 2022, Chicago, Illinois

Baylor College of Medicine Support for the Jonathan M. Levitt, PhD, Endowed Lectureship

Clinician Investigator Trainee

Association of Canada (CITAC-ACCFC) Support for CITAC-CSCI Annual Joint Meeting 2021, "Communicating and problem-solving as future clinicianscientists"

Duke University

Support for the Evolutionary Medicine Summer Institute

The LAM Foundation

Support for the 2022 International LAM Research Conference & LAMposium

The LAM Foundation

Support for the 2021 Virtual LAM Research Conference

University of Cincinnati Children's Hospital Medical Center

Support for Precision Genomics Midwest Virtual Conference, October 8, 2021

University of Toronto

Support for the Society for the Developmental Origins of Health and Disease World Congress 2022 (DoHaD)

Climate Change

Friends of the North Carolina State Museum of Natural Sciences

North Carolina Climate Change Challenge: Engaging the Public in Citizen Science To Change the World

Georgia Tech Research Corporation

Translational fellowship program for establishing a community for 'Integrative Health and Environment'

International Indian Treaty Council

Black Hills Environmental Health Project

GRANT AWARDEE INDEX

Ketab Corp

Miami Mangrove Mission

Living Life Source Foundation

Ecological Restoration of a Royal Fishpond with Native Hawaiian Youth as a Climate Change Strategy to Promote Wellbeing

Morehead Planetarium and Science Center

Sharing Your Science: An Online Science Communication Pilot Project to Train Climate and Human Health Experts

Mycelium Youth Network

Mycelium Youth Network: Mapping the Impact of Climate Resilient Education on the Social-Emotional Wellness of Youth

Nelson A Rockefeller Empire State Plaza Performing Arts Center (aka The Egg Center for the Performing Arts)

A SPORK IN THE ROAD: An educational theater piece for climate empowerment

North Carolina Museum of Life and Science

Imagine Durham: A Whole-Family Humanities Approach to Climate, Health, and Possible Futures

North Carolina Public Television Foundation

Step Up: Youth Voices on Climate Change & Human Health

The Sylvia Bozeman and Rhonda Hughes EDGE Foundation

Opportunity for Students from Under-Represented Populations to Build Professional Skills and Networks in Quantitative Life and Earth Sciences at the Interface of Climate Change and Health

University of North Carolina-Chapel Hill Climate and Environmental Change and Preterm Birth

University of North Carolina-Chapel Hill

Using the power of place-based, solutions-focused case studies, and hands-on STEM instruction to engage diverse youth in learning about extreme heat in Durham, NC

University of Tennessee-Knoxville

A Tasting Menu of Quantitative Modeling for Researchers in the Life and Earth Sciences Tackling the Interface of Climate Change and Health

University of Texas Medical Branch-Galveston

Data science and genomic approach to mitigate arboviruses in the current era of climate change

Weill Medical College of Cornell University

Towards combating climate changeinduced coral bleaching with optimized DNA sequencing and strain-resolved bioinformatics

Young Audiences New Jersey & Eastern Pennsylvania

A SPORK IN THE ROAD: An educational theater piece for climate empowerment

Diversity in Science

American Association for the Advancement of Science SEA Change NC Cohort Workshop

American Institute of Chemical Engineers

The Cato T. Laurencin Regenerative Engineering Society Founder's Award

American Society for Cell Biology

Partnering to Advance Imaging Research for Underrepresented Minority Scientists Program (PAIR-UP)

BlackInCHem, Inc

The BlackInX Leadership Summit: Engaging and Training Leaders of the BlackInX Movement

Brown University

A Qualitative Investigation of Narragansett Tribal Conceptualizations of Open and Closed Mindsets

City of Washington Celebrating Diversity Music Concert 2022

Deep Medicine Circle Deep Medicine Circle: Herbal Apothecary

Duke University

Dr. Brenda Armstrong Endowment: Support of BOOST activities

Flood Group SiSTEM Planning Proposal

James B. Hunt Jr. Institute for Educational Leadership and Policy Foundation Elevating Equitable Education In North Carolina Latinx Education Center Latinx Education Summit 2022

Leadership Triangle Scholarship Fund for Leadership Triangle Regional Programs

Massachusetts Institute of Technology Chemical Bonding Fellows

National Humanities Center S.E.E.D. Fellows 2022

National Paideia Center DIALOGUES ON RACIAL JUSTICE (TIP) Version 2.0

Native BioData Consortium

Indigenous Innovation, Data Economies, and Artificial Intelligence Summit (IDEAS)

NCCU Foundation, Inc. BWF-Cheatham White Scholars at NCCU

New Venture Fund Science Philanthropy Alliance - Civic

Science Philanthropy Alliance - Civic Science Fellow

North Carolina Central University

LIFT2 - Leadership Institute for Future Teachers (Cohort 2)

North Carolina Community Foundation/

North Carolina Network of Grantmakers NC Racial Equity and Social Impact Fellowship Landscape Scan

Pennsylvania State University

Postdoctoral Diversity Enrichment Program Transition to Faculty Award

Profound Ladies Diversity in Teaching

Public School Forum of North Carolina Dudley Flood Center for Educational Equity & Opportunity, 2023

Society of General Physiologists Mapping the Pain Landscape: From Molecules to Medicine

Stanford University Stanford Advancing Health Equity and Diversity. (AHEaD)

The STEM Mentorship Academy Mentorship and Tutoring in Triangle-Area Schools

Thrive Scholars Burroughs Wellcome Fund Thrive Scholars Sponsorship 2022 Tides Center 100Kin10 unCommission

University of Alabama-Birmingham School of Medicine Burroughs Wellcome Scholars

University of North Carolina-Chapel Hill M&I HBCU Bridge Summer Research Opportunity Program (SROP)

University of North Carolina-Chapel Hill Equity Coalition NC Early Childhood Policy Action Addon

University of North Carolina-Chapel Hill Introducing a new anti-racism program at University of North Carolina-Chapel Hill

Vanderbilt University

Promoting Engagement in science for underrepresented Ethnic and Racial minorities (P.E.E.R)

Village of Wisdom Integrating Culturally Affirming Instruction to Improve Academic Performance

Washington University Healing Equity and Reflection Initiative

WomenNC

WomenNC HBCU Initiative for Gender-Focused Undergraduate Scholar Social Science Research

Working To Extend Anti-Racist Education

Support for Healthy Racial Identities From the Start: A Play-Based Curriculum for Pre-K Kids

Infectious Disease

Career Development

Albert Einstein College of Medicine of Yeshiva University

Career Guidance for Trainees Evaluation Workshop

Brown University

Career Guidance for Trainees Evaluation Workshop

Johns Hopkins University School of Medicine

Career Guidance for Trainees Evaluation Workshop

Kansas Bioscience Organization

Career Guidance for Trainees Evaluation Workshop

University of Delaware

Career Guidance for Trainees Evaluation Workshop

University of Minnesota Career Guidance for Trainees Evaluation Workshop

University of Pittsburgh

Career Guidance for Trainees Evaluation Workshop

University of Rochester Career Guidance for Trainees Evaluation Workshop

University of Toronto Career Guidance for Trainees Evaluation Workshop

Vanderbilt University Career Guidance for Trainees Evaluation Workshop

General

Aegean Conferences, Inc.

Support for 6th International Conference on Model Hosts, Oct 1-6, 2022

American Society for Microbiology ASM Professional and Skills

Development programs

American Society for Rickettsiology

Support for 32nd Meeting of the American Society for Rickettsiology, July 8-11, 2023

American Society for Virology

41st Annual Meeting of the American Society for Virology, July 16-20, 2022

American Society of Tropical Medicine and Hygiene

Support for the Burroughs Wellcome Fund/American Society of Tropical Medicine and Hygiene Fellowship, 2022-2024

American Society of Tropical Medicine and Hygiene

American Committee of Molecular, Cellular and Immunoparasitology (ACMCIP) Scientific Sessions at the 2022 Annual Meeting, Oct 30-Nov 3

American Society of Tropical Medicine and Hygiene

Support for ASTMH 2021 Annual Meeting General Meeting

Annual KSHV Conference

Support for annual KSHV conference, including past BWF Path awardees: Ren Sun, Blossom Damania, Britt Glaunsinger, Chris Sullivan and Linda van Dyk, July 10-13, 2022

Association of American Veterinary Medical Colleges

Support for Becoming Faculty: a short course on launching a scientific career, Aug 4-6, 2022

Canadian Association of Postdoctoral Administrators

Sponsor of the ninth annual conference of the Canadian Association of the Postdoctoral Administrators, November 1-5, 2021

CIFAR

CIFAR-BWF Workshop on the Future of Mycology

Cornell University

Support for 14th International Doublestranded RNA Virus Symposium, Oct 10-14, 2022

Cornell University

Support for 2022 Burroughs Wellcome Fund "Becoming Faculty" Workshop, Aug 4-6, 2022

Cornell University

Support for 6th National Colloquium for Combined DVM-PhD Biomedical Scientists, Aug 4, 2022

Fred Hutchinson Cancer Research Center

ANAEROBE 2022: The 16th Biennial Congress of the Anaerobe Society of the Americas to be held July 28-31 in Seattle, WA

Genetics Society of America

Registration waiver for low and middle income country participants in 2022 GSA Conferences

Gordon Research Conferences

Gordon Research Conference and Seminar (GRC and GRC) on Sensory Transduction in Microorganisms (STIM) to be held in person in Ventura, California, in January 2022

Graduate Career Consortium

Support for Graduate Career Consortium 2022 Annual Conference, July 5-8, 2022

Human Vaccines Project

Communicating the Role of Human Immunology in Solving Major Global Health Issues

Human Vaccines Project

Support for The Human Immunome Al Summit, Sept 27-29, 2022

Indiana University South Bend

Support for bringing public awareness to climate change and human health through the art and science of protein structure

International Interferon and Cytokine Society

Support for Trainee events at the ICIS annual scientific meeting, Sept 20-23, 2022

Iowa State University

Conference: Anti-helmintics V: Drugs, Resistance & Vaccines. March 1-3, 2022

Marine Biological Laboratory (MBL)

MOMY 25th Reunion Scientific Symposium, November 8th-11th, 2021 at the MBL

Marine Biological Laboratory (MBL)

Support for Molecular Mycology Course Renewal for 3 years (2022-2024)

Midwestern University

Faculty Job Market Research

Midwinter Conference of Immunologists

60th Midwinter Conference of Immunologists, Jan 22-25, 2022

National Academy of Sciences Forum on Microbial Threats

National Academy of Sciences

Support for Science Communication Colloquium: Reimagining Science Communication in the COVID Era and Beyond

National Postdoctoral Association

Diversity, Equity, Inclusion & Belonging (DEIB) Supplement to the Institutional Policy Survey

Science Communication Lab

Climate Change Agents' Guide to Story Mapping

Stanford University Training natural killer cells to fight HIV

Trustees of the University of Pennsylvania Support for Torres/Cadwell/Shin/Brodsky to present at NYU-Penn Symposium, May 9-11, 2022

University of California-Riverside

Support for the 16th Biannual Congress on Toxoplasmosis and T. gondii Research

University of California-San Diego

Support for Dr. Sunny Shin to present at UCSD on April 11, 2022 (SEMINAR)

University of Maryland-Baltimore 11th Mid-Atlantic Microbial Pathogenesis Meeting (MAMPM) February 13-15, 2022

University of North Carolina-Chapel Hill

Unique cellular and microbial nucleic acids and the activation of immunity and immunologic diseases workshop, June 6-9, 2022

University of Notre Dame

Support for Midwest Neglected Infectious Diseases regional meeting, Aug 12-13, 2022.

University of Pennsylvania

Support for BWF/VEuPathDB Michael Gottlieb Traveling Fellowship

University of Pennsylvania School of Veterinary Medicine

25th Annual Woods Hole Meeting

University of Pittsburgh

The Vira I. Heinz Chair and Affiliates Symposium, Aug 5-6, 2022

University of Texas Health Science Center-Houston

Support for the Ninth FEBS Advanced Lecture Course on Human Fungal Pathogens

University of Washington

Characterization of the mechanisms of Nipah virus entry into host cells and humoral immune response

University of Wisconsin

Support for the 8th Conference on Beneficial Microbes, July 10-14, 2022

University of Wisconsin-Madison

Support for PATH awardee, Matthew Daugherty to present a seminar entitled "Running with scissors: evolutionary conflicts between viral proteases and the host immune system" at The University of Wisconsin-Madison, hosted by PATH awardee Andrew Mehle.

University of Wisconsin-Madison

Support for 2022 Midwest Microbial Pathogenesis Conference (Sept 30, 2022)

Interfaces in Science

American Indian Science And Engineering Society

Support for the 2022 National Conference Advancing Indigenous People in STEM Graduate Research Oral and Poster Competitions, October 6-8, 2022

American Institute of Chemical Engineers

Support for the AIChE Annual Meeting, November 2021

American Institute of Chemical Engineers

Support for the 2022 Synthetic Biology: Engineering, Evolution & Design (SEED) Event, May 2-5, 2022

American Institute of Chemical Engineers

Support for the AfroBiotech, hosted by the Society of Biological Engineering, October 24-26, 2021

Biophysical Society

Support for the Biophysical Society 66th Annual Meeting, including a diversity poster session fostered by one of our PDEP awardees.

Computational and Systems Neuroscience (Cosyne)

Support for the 2022 Computational and Systems Neuroscience meeting

Duke University

Support for Engineering at the interface: Training interdisciplinary engineers at the PhD level

Georgia Institute of Technology

Support for the workshop QBioS Hands-On Modeling Workshop 2022 – Theory and Design of Genetic Circuits

Gordon Research Conferences

Support the for the Protein Folding Dynamics Gordon Research Conference: "Protein Folding Dynamics, Folding and Misfolding: Effects of Evolution and Environment," January 9-14, 2022

Louisiana State University and Agricultural and Mechanical College

Support for travel to the annual Society for the Advancement of Chicanos/ Hispanics and Native Americans in Science (SACNAS) conference

Northern Arizona University

Support for the Networking, Research Opportunities Colloquia Series (NetROC)

Society for Biomaterials

Support for the BWF BioInterfaces Award, a travel fellowship for post docs

Stanford University

Support for travel to the annual Society for the Advancement of Chicanos/ Hispanics and Native Americans in Science (SACNAS) conference

University of California-Davis

A Novel Program to Identify, Support and Retain Clinical Scientists Impacted by COVID-19 Caregiving Challenges

University of California-Davis

A Novel Program to Identify, Support and Retain Clinical Scientists Impacted by COVID-19 Caregiving Challenges

University of California-San Diego

Support for the 9th Annual Winter Q-BIO Meeting

University of Chicago

Support for SEE-Diversity 2022, September 9-13, 2022

University of New Mexico Foundation

Support for the IRACDA 2022 National Meeting: Cultivating Collaborative Communities

University of North Texas Health Science Center-Fort Worth

Support for the project titled "So You Got a PhD...What's Next?"

University of Rochester

Support for travel to the annual Society for the Advancement of Chicanos/ Hispanics and Native Americans in Science (SACNAS) conference

University of Washington

Support for the 13th Hershey Conference on Developmental Brain Injury, May 31 - June 3, 2022

Regulatory Science

American Society of Gene & Cell Therapy Support for ASGCT's 25th Annual Meeting

Everylife Foundation for Rare Diseases

Support for the 2021 Rare Disease Scientific Workshop, October 20, 2021 (virtual)

Foundation for Food and Agriculture Research

Support for the Rockey FFAR Fellows Program: Preparing future scientists to tackle complex food and agriculture challenges

Health Research Alliance, Inc. (HRA) Support for 2022

International Society for Stem Cell Research

Support for the ISSCR 2022 Annual Meeting and the ISSCR Developing Standards for Stem Cell Research Digital Series

Massive Analysis and QC Society (MAQC)

Support for the MAQC Workshop on Regulatory Science Approaches for Food and Drug Safety, October 19-21, 2022

National Academy of Sciences

Support for the Forum on Regenerative Medicine

National Academy of Sciences

Support for the Forum on Drug Discovery, Development, and Translation

New York Stem Cell Foundation

Support for the 2021 NYSCF Conference, October 19-20, 2021 (virtual)

Nexus Health, Inc.

Support for the project, Accelerating Regulatory Approval of Animal Replacement Technologies in Safety Testing and Biomedical Research

Partnership For Cures

Support for Community-Based Engagement within Clinical Repurposing to Impact Diversity, Equity and Inclusion (DEI)

Society of Toxicology

Support for the Hispanic Organization of Toxicologists Award Endowment

Society of Toxicology

Support for the SOT 61st Annual Meeting and ToxExpo

Tissue Engineering & Regenerative Medicine International Society (TERMIS)-Americas

Support for the 2022 Annual Meeting, July 10-13, 2022, Toronto, Canada

University Corporation, San Francisco State

Support for the project "Examining Agents of Change Initiative to Diversify Clinical Studies"

Reproductive Science

American Association of Obstetricians & Gynecologists Foundation

Support for Physician Scientist Career Development Award to Promote Diversity

American Society for Reproductive Immunology

Support for ASRI 2022: The 41st Annual Meeting of the American Society for Reproductive Immunology

Magee-Women's Research Institute

Support for the 2021 Magee-Womens Research Summit

Perinatal Research Society

Support for PRS Annual Meeting Sponsorship

Preterm birth International Collaborative (PREBIC, Inc.)

Support for the PREBIC, North America - Preterm birth prevention strategy development workshop

Society for Reproductive Investigation

Support for SRI 69th Annual Meeting: Reaching New Heights in Reproductive Research

Society for the Study of Reproduction

Support for the SSR's 55th Annual Meeting

University of Cincinnati Children's Hospital Medical Center

Support for Developing the Next Generation of Pediatric Researchers: A Convening by the Burroughs Wellcome Fund and the Coalition for Pediatric Medical Research

University of Missouri-Columbia School of Medicine

Support for research related expenses for three Reproductive Scientist Development Program (RSDP) scholars.

Vanderbilt University

Support for a Community Resource to Reveal Mechanisms for Mammalian Birth Timing

Science and Philanthropy

Communications/Science Writing

North Carolina Community Foundation/ North Carolina Network of Grantmakers Support for Communications Training Initiative with the Dudley Flood Center

Sigma Xi, The Scientific Research Society

Support for Science Policy Bootcamp and International Forum on Research Excellence (IFoRE)

General Philanthropy

American Association for the Advancement of Science

Support for the 2022 AAAS Mass Media Fellowship

Associated Universities Inc.

Support for "Big Science", a broadcaster proof-of-concept video and education kit, with Associated Universities (AUI), Green Bank Pictures (GBP)

Boston University

Support for SciCommers at Boston University College of Communication

Candid

Support for "Connecting Nonprofits to the Resources They Need to Thrive"

ComSciCon

Support for ComSciCon-Flagship 2022 conference on science communication for graduate students at MIT in Cambridge, MA

Food and Environment Reporting Network (FERN)

Support for Gastropod Coverage of Biomedical Research and Science Communication Training

Independent Television Service

Support for "The Brain Trilogy: a public media initiative to increase the American public's understanding of neurodegenerative disease"

Journalism Funding Partners

Support for Life Sciences Reporting Fellowship

Just Human Productions, Inc.

Support for the docuseries podcast "American Diagnosis Season 4: Rezilience: Surviving Manifest Destiny"

MacGillivray Freeman Films Educational Foundation

Support for Medical Marvels Educational Outreach Plan

Media Impact Funders

Support for Media Impact Funders membership dues

National Geographic Society

Support for Integral Sustainability Plan; Álvaro Laiz, The Edge

National Geographic Society

Support for Anand Varma and the Science Wonder Lab: Innovation to Enhance Science Communication and Engagement

National Humanities Center

Support for "A Crisis of Caring: The Humanities and Our Health", conference April 11-14, 2022

North Carolina Biotechnology Center: Triangle Women in STEM

Support for Empowering Women in STEM to Thrive

North Carolina Community Foundation Support for general operating capital available to support NC's news and information ecosystem

North Carolina Community Foundation/ North Carolina Network of Grantmakers

General membership dues for 2021-2022

North Carolina Sea Grant

Support for Advancing the North Carolina Science, Technology, Engineering and Mathematics (STEM) Policy Fellowship through expanding partnerships

Open Notebook

Support for The Open Notebook Early-Career Fellowship Program (TON/BWF) and operating costs

Open Notebook

Support for 2022 fellow in our earlycareer fellowship program, and a peer-mentoring program for local and general-assignment reporters

Oregon Health Science and Science University Knight Cancer Institute Support for the Early Detection of Cancer Conference, directed by BWF

PEAK Grantmaking

Support for PEAK Grantmaking Membership Dues for 2021-2022

Board Member Brian Druker, MD

Queen's University

Support for the 25th conference on Statistics, Science and Public Policy, April 20-23, 2022.

Research!America

Support for Burroughs Wellcome Fund Science Policy and Communications Internship Program

Science Communicators of North Carolina

Support for Science Communicators of North Carolina (SCONC) Education and Outreach Project

Science Talk

Support for Science Talk '22: Science Communication is a Central Connector, March 23-25, 2022

ScienceCounts

Support for "Assessing How Americans Want to Participate in Science"

Sigma Xi, The Scientific Research Society

Support for Inclusive Science Communication – the continuation of the podcast series and support for Sigma Xi Annual Meeting November 5-7, 2021

The Center for Advancing Research Impact in Society (ARIS)

Support for "The Future of Broader Impacts", a convening hosted by the Center for Advancing Research Impact in Society (ARIS) May 2-4, 2022 in Durham, NC

The Conversation U.S.

Support for Increasing the Voices of Scholars of Color in the Biomedical and STEM fields in the Media

University of California-Santa Cruz

Support for Data-Driven Animation for Science Communication

University of Rhode Island Foundation

Support for 2021 Inclusive SciComm Symposium, October 14-16, 2021, hosted by The University of Rhode Island's Metcalf Institute

Science Education

American Physical Society PhysicsQuest Kits

Asheville City Schools Foundation

Burroughs Wellcome Fund 2021 North Carolina Regional Teachers of the Year Retreat

Audacity Labs

Youth Climate Change Design Sprint and Accelerator

Charitable Ventures

STEM Funders Network Equitable STEM Education Access Initiative

Envision Excellence In Stem Education

People, Planet, Prosperity: 2022 STEM Learning Ecosystems Community of Practice Convening

Grantmakers for Education

Grantmakers For Education Membership Dues 2022

Marbles Kids Museum

2022 NC Science Network Annual Meeting | June 6 & 7, 2022

McDowell County Schools

Support for the Singapore Math Project: Building a Strong Math Foundation Through Constructing, Drawing, and Solving, a proposal by Eastfield Global Magnet School, McDowell County Schools (Phase V)

Movement of Youth

At Promise Academy – STEM Mentorship & Tutoring (pilot program)

Nash Community College

SSEP rural areas program development, 2022-2023

National Academy of Sciences

The Roundtable on Mentorship and Well-being in Higher Education and Scientific Research

National Association of Academies of Science

2022 AJAS Hybrid Conference

NC Tennis Foundation, Inc.

Support for the 2nd Annual Virtual NC Tennis Foundation Auction and Tennis "Ball," Tuesday, June 7th, 2022

North Carolina Association for Biomedical Research

Bridging the Gap 2022

North Carolina Community Foundation/ North Carolina Network of Grantmakers

Funder Collaboratives Invest Early NC 2022-2023

North Carolina Department of Public Instruction

North Carolina Teacher of the Year Program 2022-2024

North Carolina Department of Public Instruction

NC Teacher of the Year Regional Participation in the Educational Policy and Fellowship Program

North Carolina Public Television Foundation

Evolution of a Revolution: Genetic Medicine; A Gene Therapy Documentary Project

North Carolina Society of Hispanic Professionals

STEM Awarness, Education and Outreach for Participation/Enrollment of Hispanic Students on STEM Programs in North Carolina

North Carolina State University

Diversity in Leadership Fellowship, eastern region

STEM Next Opportunity Fund

Scaling and Sustaining Impact on STEM Equity and Inclusion: Building a Federal STEM and Tech Equity Fellowship Network

STEM WEST INC STEM West Networking and Support

Teach for America

Sponsorship of Teach For America's (TFA) One Day Breakfast in Raleigh on Thursday, May 12th

University of Mount Olive STEM on the Green

University of North Carolina-Wilmington

Support for the Singapore Math Program in Cumberland County schools, including Alderman Road Elementary School, Gray's Creek Elementary School and Gallberry Farm Elementary School

University of North Carolina-Wilmington Support for the STEM SENC Singapore Summit Collaboration, 2022

Wilkes County Schools

Singapore Math Project North Wilkesboro Elementary School Wilkes County School District (Phase V)

Science, Math, and Technology Science Champion

James B. Hunt Jr. Institute for Educational Leadership and Policy Foundation

Policymakers in Advancing Education Opportunities Across the Educational Continuum and Promoting College and Career Ready Standards and STEM Education (2022)

National Girls Collaborative

NC STEM Center support for The Connectory (annual fee structure)

North Carolina Alliance for School Leadership Development

Aspiring Superintendent Program Cohort VI

North Carolina Alliance for School Leadership Development

Next Generation Superintendent Development Program Cohort IX

North Carolina Chamber

Education & Workforce Conference August 2022

North Carolina Principals and Assistant Principals' Association

Assistant Principal Leadership Accelerator

North Carolina School of Science and Math

American Junior Academy of Science and AAAS

North Carolina Science Fair Foundation NC Science and Engineering Fair 2022

North Carolina Science Fair Foundation NC Collaborative for Advancing Student Led Research Pilot

North Carolina Science Fair Foundation NC Collaborative for Advancing Student-Led Research

North Carolina Science Leadership Association

NCSLA Science Leadership Fellows Cohort 2022-2024

North Carolina State University

A Cross-Curriculum Exploration of Food and the Environment

Smithsonian Institution Smithsonian STEM Schools for Sustainable Development

Successful Practices Network Learning 2025

University of North Carolina-Chapel Hill Morehead Planetarium Portal Support,

2022

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